## Math 182 Honors Quiz 12 Version A

1. Find the volume of the solid generated by revolving the region bounded by $y=x^{4}$, $y=0$ and $x=1$ about the $x$-axis.
2. Find the area of the surface of revolution generated by revolving the arc $y=x^{2}-x+1$ from $x=0$ to $x=1$ about the $x$-axis.
3. Find the area of the surface of revolution generated by revolving the arc $y=x^{2}-x+1$ from $x=0$ to $x=1$ about the $y$-axis.

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4. Determine whether the following infinite series converge and explain your answer.
(i) $\sum_{n=1}^{\infty} \frac{1}{n+13}$
(ii) $\sum_{n=1}^{\infty} \frac{\log (n+13)}{n^{2}}$
(iii) $\sum_{n=1}^{\infty} \frac{2^{n}}{n^{n}}$

